



# Meeting Fishery Resource Goals through an Integrated Restoration Strategy

South Delta Fish Facilities Forum  
(SDFFF)

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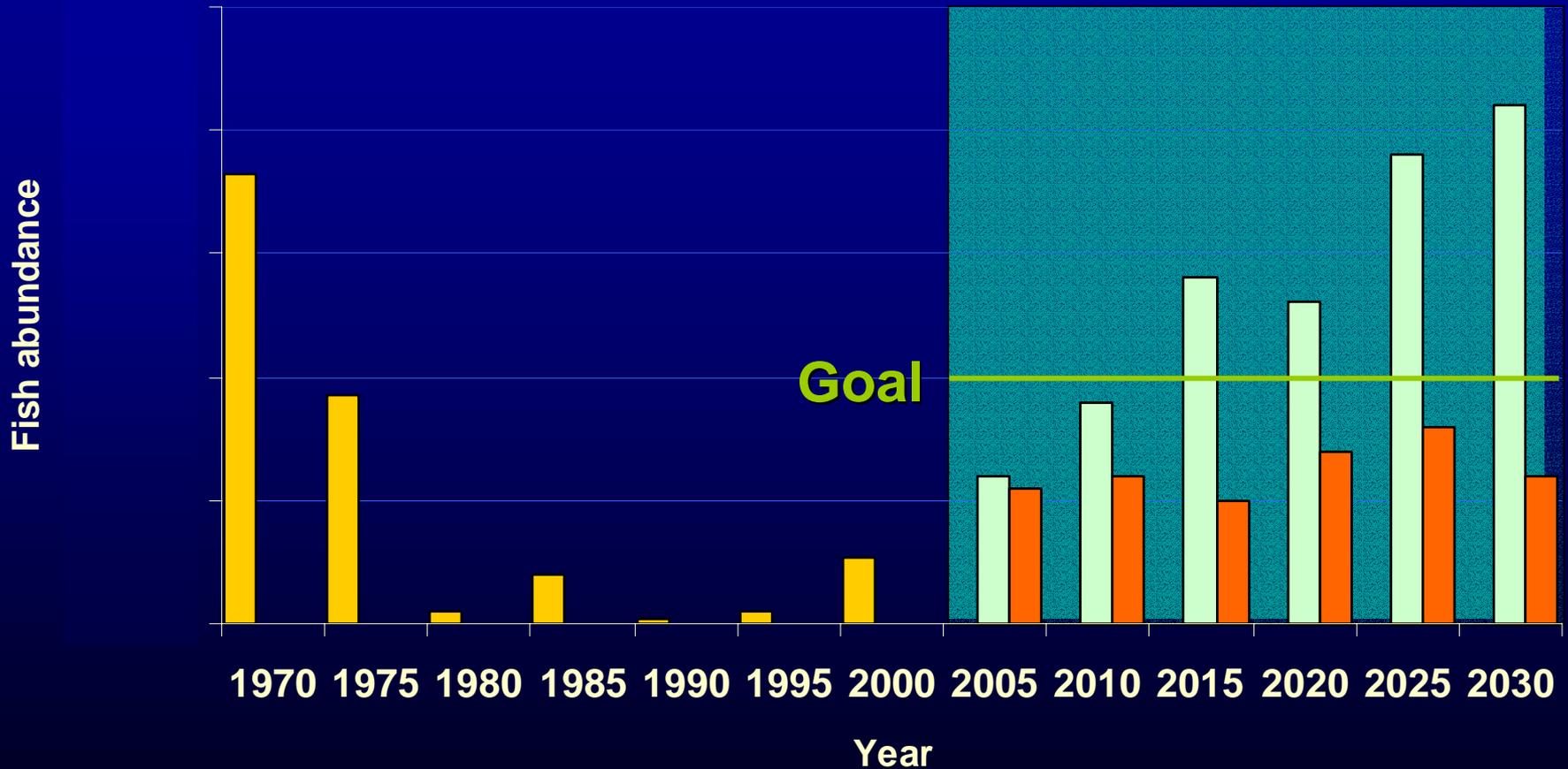
January 6, 2004

# Goals for Fishery Resources

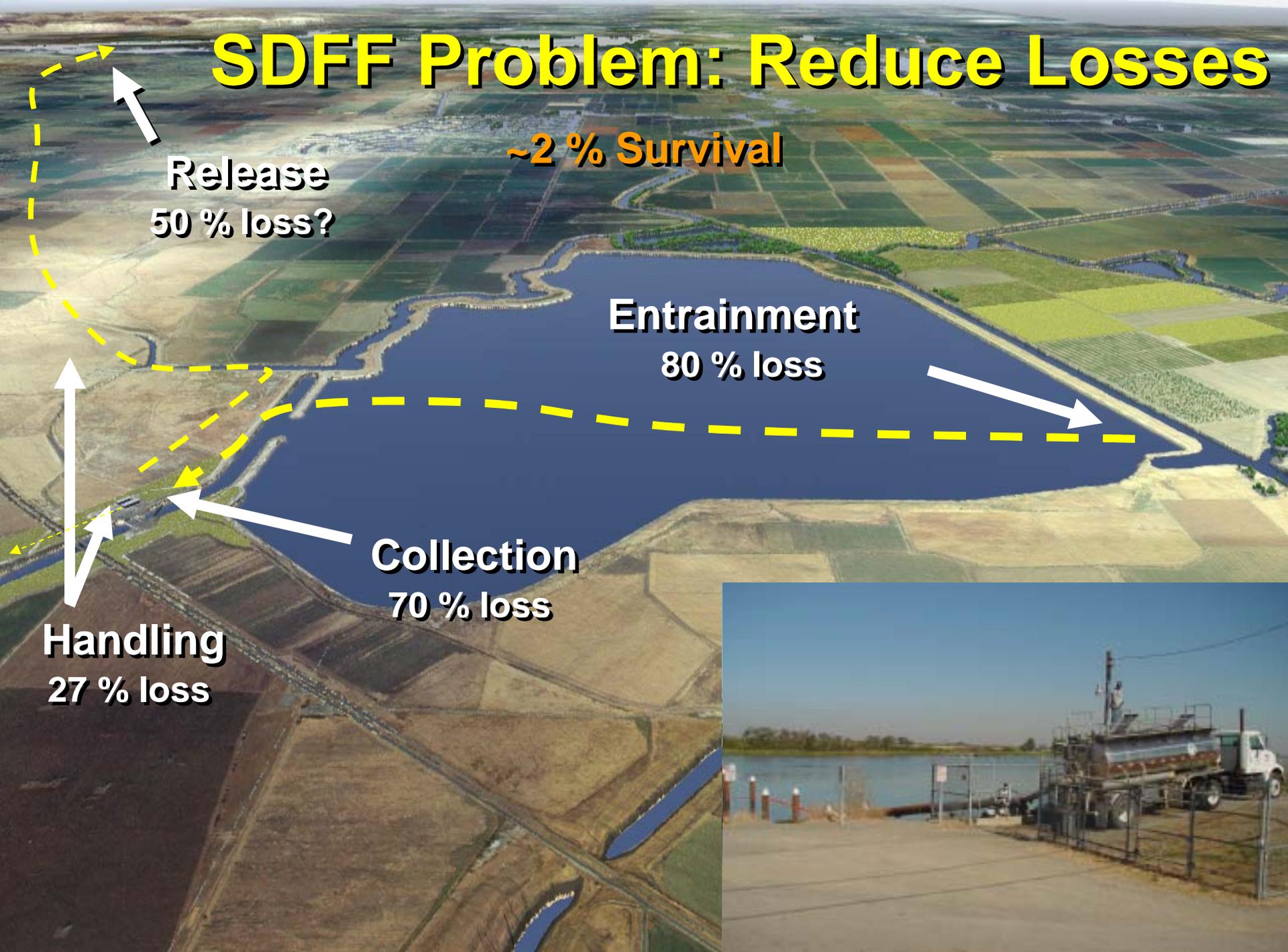
- Recover listed species
  - Delta smelt
  - Listed salmonid stocks
- Sustain harvest and escapement
  - Unlisted salmon stocks
- Double natural production (CVPIA)
  - All salmonid stocks
  - American shad
  - Sturgeon and
  - Striped bass
- Ecosystem restoration

# Overall Problem:

Choose actions with the best chances of achieving fish goals with available resources



# SDFF Problem: Reduce Losses



**~2 % Survival**

**Release  
50 % loss?**

**Entrainment  
80 % loss**

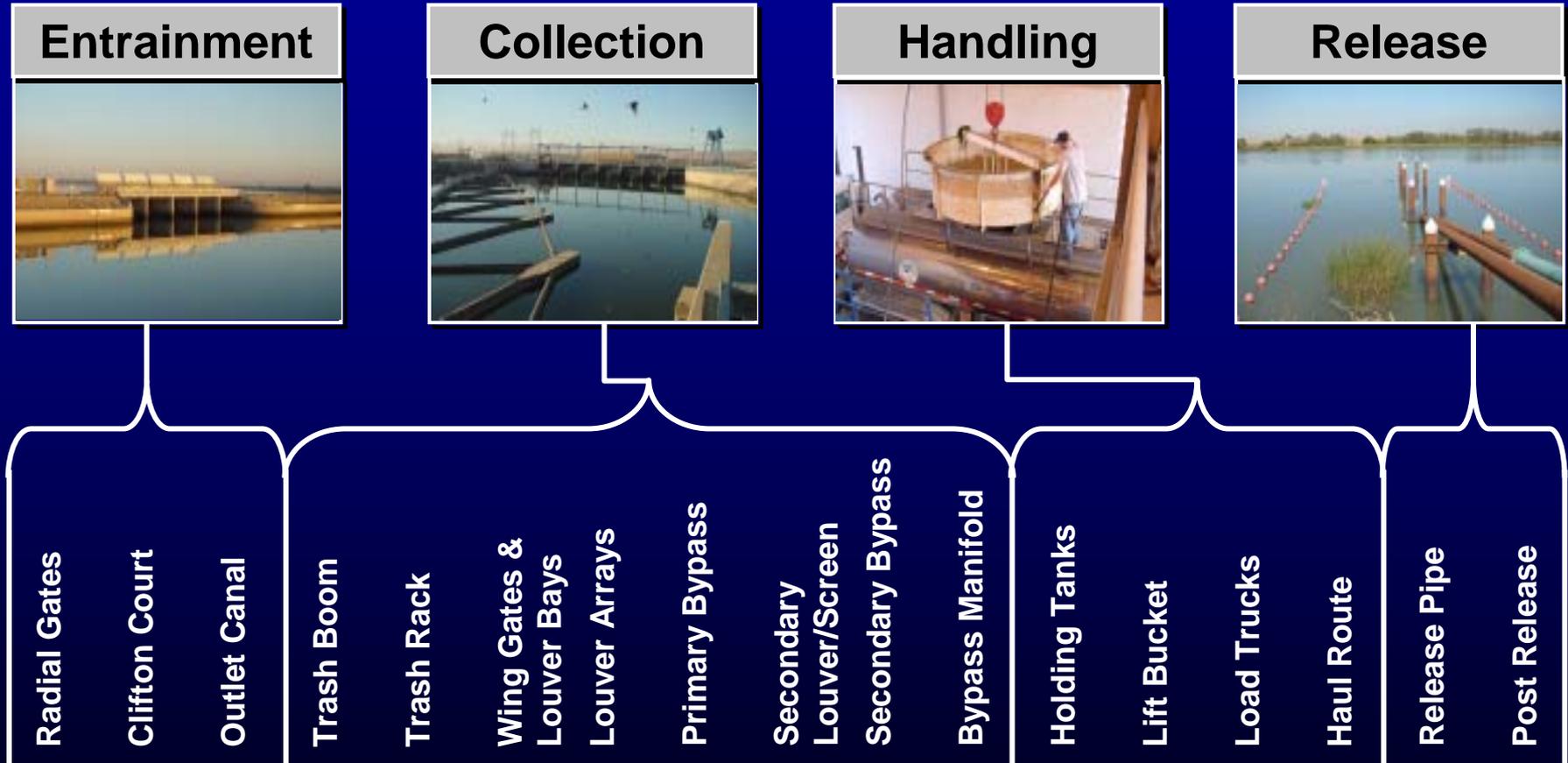
**Collection  
70 % loss**

**Handling  
27 % loss**



# Problems at Sdff

## Among Four Segments



## Hatcheries

Action to manage  
use of fish culture

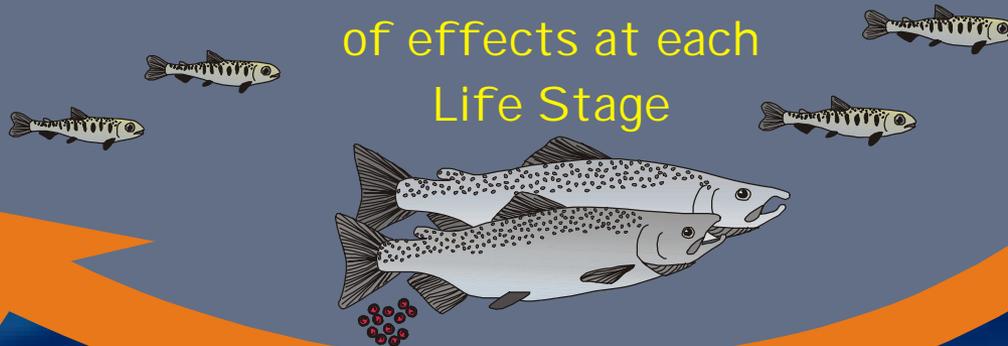
## Habitat

Action to manage  
land use

Integrated Modeling Framework

## Life Cycle Model

of effects at each  
Life Stage



## Harvest

Action to manage  
harvesting

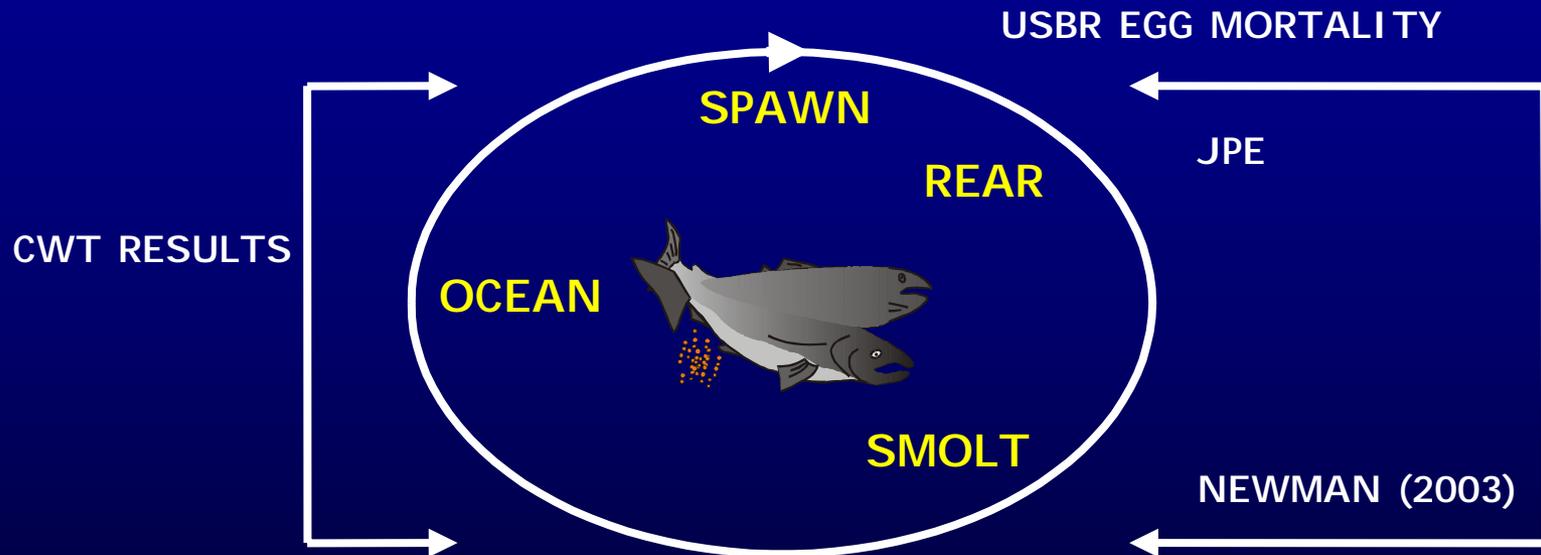
## Hydro

Action to manage  
water use

# Collaboration Strategies

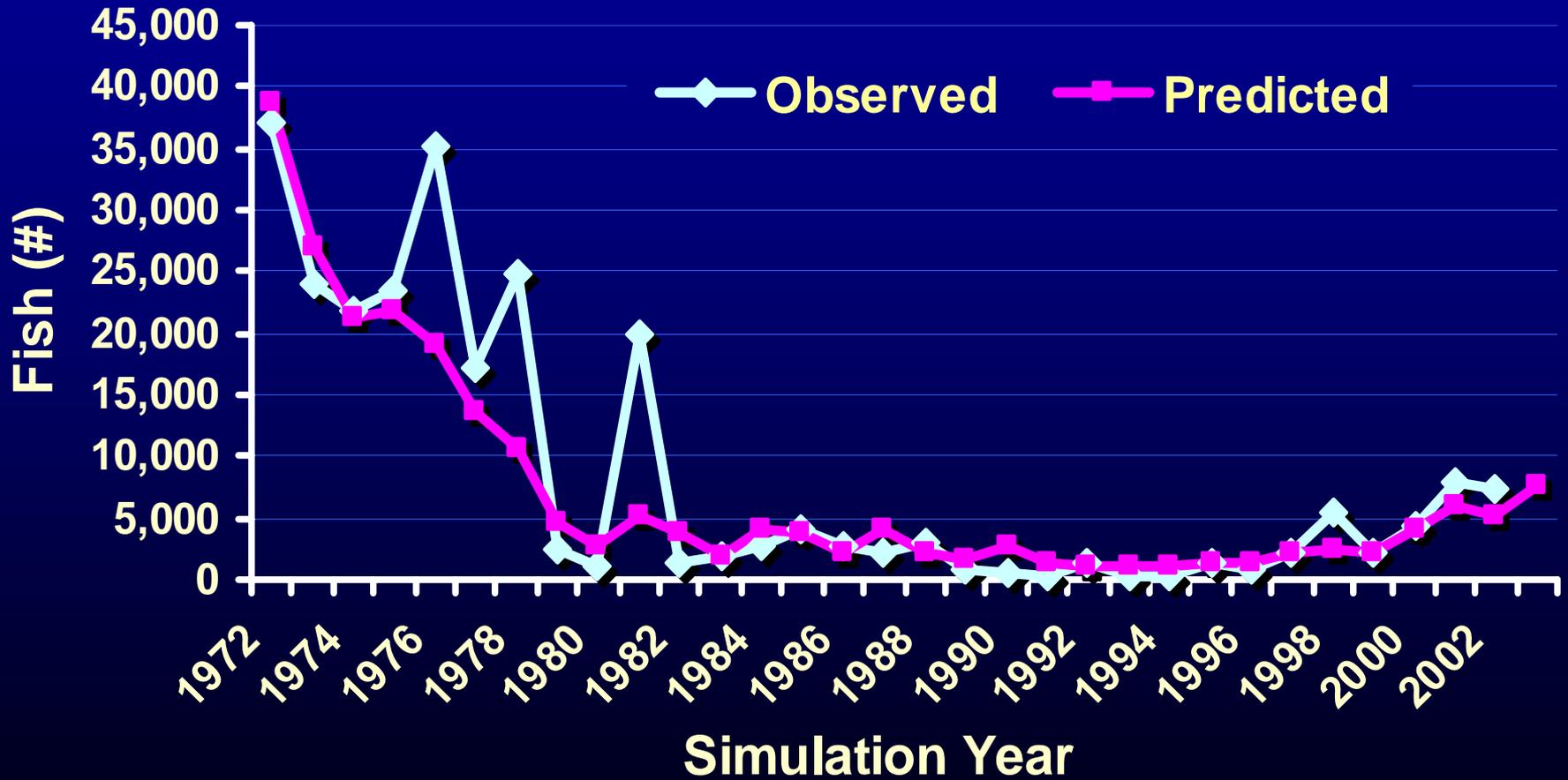
- **Steering Committee**
  - **Policy-level representatives**
  - **From each fisheries agency**
- **Review existing modeling efforts first**
- **Build model in MS Excel**
  - **For easy review**
  - **For easy use**

# Winter Run Model Sub-models



# Hind cast

## Escapement



# Strategic Prioritization

- **Estimate for packages of actions**
  - **Fish benefits**
  - **Costs**
  - **Cost-effectiveness**
- **Prioritize packages by cost-effectiveness**
  - **To prioritize packages for funding**
  - **To maximize fish benefits**
- **Support restoration investment decisions**

# Challenges in Achieving Fishery Goals

TUESDAY, AUGUST 27, 2002

## Seattle Post-Intelligencer

### GAO questions spending on salmon

*Recovery efforts have little definite success, says federal report*

Federal agencies have spent more than \$3.3 billion in the past two decades to help Columbia Basin salmon and steelhead runs recover – with little conclusive success, the GAO reported ...

# Where Next for the SDFFF?

## ■ Encourage

- Development of economic aspects
- Probable cost & budget estimates
- Peer review

## ■ Identify

- Options with the best chances of achieving fish goals with available resources
- Implications of these options for SDFFF
- Other policy info needs
- Schedules for SDFFF & other decisions

## ■ Other actions or directions?